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NEWS 2		"Ask CAS" for self-help around the clock
NEWS 3	SEP 09	CA/CAplus records now contain indexing from 1907 to the present
NEWS 4	DEC 08	INPADOC: Legal Status data reloaded
NEWS 5	SEP 29	DISSABS now available on STN
NEWS 6	OCT 10	PCTFULL: Two new display fields added
NEWS 7	OCT 21	BIOSIS file reloaded and enhanced
NEWS 8	OCT 28	BIOSIS file segment of TOXCENTER reloaded and enhanced
NEWS 9	NOV 24	MSDS-CCOHS file reloaded
NEWS 10	DEC 08	CABA reloaded with left truncation
NEWS 11	DEC 08	IMS file names changed
NEWS 12	DEC 09	Experimental property data collected by CAS now available in REGISTRY
NEWS 13	DEC 09	STN Entry Date available for display in REGISTRY and CA/CAplus
NEWS 14	DEC 17	DGENE: Two new display fields added
NEWS 15	DEC 18	BIOTECHNO no longer updated
NEWS 16	DEC 19	CROPU no longer updated; subscriber discount no longer available
NEWS 17	DEC 22	Additional INPI reactions and pre-1907 documents added to CAS databases
NEWS 18	DEC 22	IFIPAT/IFIUDB/IFICDB reloaded with new data and search fields
NEWS 19	DEC 22	ABI-INFORM now available on STN

NEWS EXPRESS	DECEMBER 28 CURRENT WINDOWS VERSION IS V7.00, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
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NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

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* * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

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=> file caplus
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                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

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FILE COVERS 1907 - 20 Jan 2004  VOL 140 ISS 4
FILE LAST UPDATED: 19 Jan 2004  (20040119/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.


=> s polymer and linker and protein and organic solvent and bond and separating
        931714 POLYMER
        783177 POLYMERS
       1269147 POLYMER
                 (POLYMER OR POLYMERS)
         14504 LINKER
          3402 LINKERS
         16439 LINKER
                 (LINKER OR LINKERS)
       1584147 PROTEIN
       1089521 PROTEINS
       1834710 PROTEIN
                 (PROTEIN OR PROTEINS)
        307065 ORGANIC
          3434 ORGANICS
        309296 ORGANIC
                 (ORGANIC OR ORGANICS)
        847319 ORG
         12865 ORGS
        851853 ORG
                 (ORG OR ORGS)
        938663 ORGANIC
                 (ORGANIC OR ORG)
        591784 SOLVENT
        295003 SOLVENTS
        746315 SOLVENT
                 (SOLVENT OR SOLVENTS)
        125778 ORGANIC SOLVENT
                 (ORGANIC(W)SOLVENT)
        472539 BOND
        239421 BONDS
        611317 BOND
                 (BOND OR BONDS)
         18500 SEPARATING
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         82474 SEPG
             1 SEPGS
         82475 SEPG
                 (SEPG OR SEPGS)
         95448 SEPARATING
                 (SEPARATING OR SEPG)
L1           0 POLYMER AND LINKER AND PROTEIN AND ORGANIC SOLVENT AND BOND AND
               SEPARATING

=> s pmma and peg and protein and methanol
         29865 PMMA
           108 PMMAS
         29871 PMMA
                 (PMMA OR PMMAS)
         27463 PEG
           992 PEGS
         27889 PEG
                 (PEG OR PEGS)
       1584147 PROTEIN
       1089521 PROTEINS
       1834710 PROTEIN
                 (PROTEIN OR PROTEINS)
        163034 METHANOL
           653 METHANOLS
        163378 METHANOL
                 (METHANOL OR METHANOLS)
L2           2 PMMA AND PEG AND PROTEIN AND METHANOL

=> d l2 1-2 ibib abs hitrn

L2   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:        2000:368777  CAPLUS
DOCUMENT NUMBER:         133:140188
TITLE:                   Microencapsulation of proteins by rapid
                         expansion of supercritical solution with a nonsolvent
AUTHOR(S):               Mishima, Kenji; Matsuyama, Kiyoshi; Tanabe, Daisaku;
                         Yamauchi, Satoru; Young, Timothy J.; Johnston, Keith
                         P.
CORPORATE SOURCE:        Dept. of Chemical Engineering, Fukuoka University,
                         Fukuoka, 814-0180, Japan
SOURCE:                  AIChE Journal (2000), 46(4), 857-865
                         CODEN: AICEAC; ISSN: 0001-1541
PUBLISHER:               American Institute of Chemical Engineers
DOCUMENT TYPE:           Journal
LANGUAGE:                English
AB   A new method-rapid expansion from supercrit. soln. with a nonsolvent
     (RESS-N)-is reported for forming polymer microparticles contg.
     proteins such as lysozyme (from chicken egg white) and lipase
     (from Pseudomonas cepacia). A suspension of protein in CO2
     contg. a cosolvent and dissolved polymer is sprayed through a nozzle to
     atm. pressure. The polymers are PEG (PEG4000; MW = 3,000,
     PEG6000; MW = 7,500, PEG20000; MW = 20,000), poly(Me methacrylate) (
     PMMA; MW = 15,000), poly(L-lactic acid) (PLA; MW = 5,000),
     poly(DL-lactide-co-glycolide) (PGLA; MW = 5,000) and PEG
     -poly(propylene glycol) (PPG)-PEG triblock copolymer (MW =
     13,000). The solubilities of these polymers in CO2 increase significantly
     with low-mol.-wt. alcs. as cosolvents. The particles do not tend to
     agglomerate after expansion, since the pure cosolvent is a nonsolvent for
     the polymer. The structure and morphol. of the microcapsules were
     investigated by TEM, SEM, and optical microscopy. The thickness of the
     polymer coating about the protein, as well as the mean particle
     diam. and particle-size distribution, could be controlled by changing the
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feed compn. of the polymer.
REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:766507 CAPLUS
DOCUMENT NUMBER: 130:29221
TITLE: Preparation of solid porous matrixes for pharmaceutical uses
INVENTOR(S): Unger, Evan C.
PATENT ASSIGNEE(S): ImaRx Pharmaceutical Corp., USA
SOURCE: PCT Int. Appl., 139 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9851282	A1	19981119	WO 1998-US9570	19980512
W: AU, BR, CA, CN, JP, KR, NZ				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 2002039594	A1	20020404	US 1998-75477	19980511
AU 9873787	A1	19981208	AU 1998-73787	19980512
EP 983060	A1	20000308	EP 1998-921109	19980512
R: DE, FR, GB, IT, NL				
US 2001018072	A1	20010830	US 2001-828762	20010409

PRIORITY APPLN. INFO.: US 1997-46379P P 19970513
US 1998-75477 A 19980511
WO 1998-US9570 W 19980512

AB A solid porous matrix formed from a surfactant, a solvent, and a bioactive agent is described. Thus, amphotericin nanoparticles were prepd. by using ZrO2 beads and a surfactant. The mixt. was milled for 24 h.
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s polymer and linker and protein and organic solvent
931714 POLYMER
783177 POLYMERS
1269147 POLYMER
(POLYMER OR POLYMERS)
14504 LINKER
3402 LINKERS
16439 LINKER
(LINKER OR LINKERS)
1584147 PROTEIN
1089521 PROTEINS
1834710 PROTEIN
(PROTEIN OR PROTEINS)
307065 ORGANIC
3434 ORGANICS
309296 ORGANIC
(ORGANIC OR ORGANICS)
847319 ORG
12865 ORGS
851853 ORG
(ORG OR ORGS)
938663 ORGANIC
(ORGANIC OR ORG)

```
        591784 SOLVENT
        295003 SOLVENTS
        746315 SOLVENT
                 (SOLVENT OR SOLVENTS)
        125778 ORGANIC SOLVENT
                 (ORGANIC(W)SOLVENT)
L3            3 POLYMER AND LINKER AND PROTEIN AND ORGANIC SOLVENT

=> d l3 1-3 ibib abs hitrn

L3   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2003:335388  CAPLUS
DOCUMENT NUMBER:          138:336897
TITLE:                    Food spoilage amine detection colorimetric method and
                          materials
INVENTOR(S):              Kalivretenos, Aristotle G.
PATENT ASSIGNEE(S):       University of Maryland, Baltimore County, USA
SOURCE:                   PCT Int. Appl., 63 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     WO 2003036260      A2   20030501       WO 2002-US34124  20021025
     WO 2003036260      A3   20031113
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD,
             RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
             CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
             NE, SN, TD, TG
     US 2003104609      A1   20030605       US 2001-983743   20011025
PRIORITY APPLN. INFO.:                   US 2001-983743   A  20011025
OTHER SOURCE(S):          MARPAT 138:336897
AB   Compds. linked to a solid support through a divalent linker
     moiety are disclosed. In particular, compds. such as 1-
     hydroxybenzotriazole-6-carboxylic acid are directly linked to the support
     under mild conditions (i.e., in aq. or org. solvents
     at neutral pH and at room temp.). The polymer bound
     1-hydroxybenzotriazole-6-carboxylic acid can be used for the
     derivatization of amines as well as for single step amino group
     modification of proteins, peptides, and amines via acylation or
     sulfonylation reactions. A flow through device and method for the single
     step amino group modifications of proteins, peptides, and amines
     is disclosed. Also disclosed is a flow through device for the detection
     of amines in a sample. Addnl., a device and method for the detection of
     amines in a sample using 1-hydroxybenzotriazole-6-carboxylic acid are
     disclosed. In a preferred embodiment, the device is used to detect the
     presence of amines in a spoiled meat product. Diagnostic kits for
     detecting the presence of amines are also disclosed.

L3   ANSWER 2 OF 3  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2002:674587  CAPLUS
DOCUMENT NUMBER:          137:197872
```

TITLE: Process for preparing peptide nucleic acid probe using polymeric photoacid generator
INVENTOR(S): Kim, Min-hwan; Kim, Do-yun; Moon, Bong-seok; Park, Jae-chan; Kim, Young-hee; Seo, Seung-joo
PATENT ASSIGNEE(S): Samsung Electronics Co., Ltd., S. Korea
SOURCE: U.S. Pat. Appl. Publ., 11 pp., Cont.-in-part of U.S. 6,359,125.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002122874	A1	20020905	US 2002-73071	20020207
US 6660479	B2	20031209		
KR 2001001577	A	20010105	KR 1999-20899	19990607
WO 2000075372	A1	20001214	WO 2000-KR590	20000607
W: CN, JP, KR, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6359125	B1	20020319	US 2001-762611	20010207

PRIORITY APPLN. INFO.: KR 1999-20899 A 19990607
WO 2000-KR590 W 20000607
US 2001-762611 A2 20010207

AB The invention concerns a process for prepg. arrays of oligopeptide nucleic acid probes immobilized on a solid matrix by employing polymeric photoacid generator. Arrays of peptide nucleic acid probes of the invention are prepd. by the steps of: (i) derivatizing the surface of a solid matrix with aminoalkyloxysilane in alc. and attaching a **linker** with acid-labile protecting group on the solid matrix; (ii) coating the solid matrix with polymeric photoacid generator(PAG); (iii) exposing the solid matrix thus coated to light to generate acid for eliminating acid-labile protecting group; (iv) washing the solid matrix with alk. soln. or **org. solvent** and removing residual polymeric photoacid generator; and, (v) attaching a monomeric peptide nucleic acid with acid-labile protecting group to the solid matrix, and repeating the previous Steps of (ii) to (v). In accordance with the present invention, neutral peptide nucleic acid probes, as the promising substitute for conventional neg.-charged oligonucleotide probes, can be prepd. by employing polymeric photoacid generator in a simple and efficient manner, while overcoming the problems confronted in the prior art DNA chip fabrication using PR system and PPA system.

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:466317 CAPLUS
DOCUMENT NUMBER: 137:43912
TITLE: Acid-labile isotope-coded extractant (ALICE) and its use in quantitative mass spectrometric analysis of **protein** mixtures
INVENTOR(S): Qiu, Yongchang; Wang, Jack H.; Hewick, Rodney M.
PATENT ASSIGNEE(S): Genetics Institute, Inc., USA
SOURCE: PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2002048717 A2 20020620 WO 2001-US50745 20011022
WO 2002048717 A3 20030501
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
AU 2002043385 A5 20020624 AU 2002-43385 20011022
US 2002164809 A1 20021107 US 2001-45170 20011022
EP 1330654 A2 20030730 EP 2001-989278 20011022
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRIORITY APPLN. INFO.: US 2000-242643P P 20001023
WO 2001-US50745 W 20011022

AB The invention concerns a method which provides novel compds., termed acid-labile isotope-coded extractants (ALICE), for quant. mass spectrometric anal. of **protein** mixts. The compds. contain a thiol-reactive group that is used to capture cysteine-contg. peptides from all peptide mixts., an acid-labile **linker**, and a non-biol. **polymer**. One of the two acid-labile **linkers** is isotopically labeled and therefore enables the direct quantitation of peptides/**proteins** through mass spectrometric anal. Because no functional **proteins** are required to capture peptides, a higher percentage of **org. solvent** can be used to solubilize the peptides, particularly hydrophobic peptides, through the binding, washing and eluting steps, thus permitting much better recovery of peptides. Moreover, since the peptides are covalently linked to the non-biol. **polymer** (ALICE), more stringent washing is allowed in order to completely remove non-specifically bound species. Finally, peptides captured by ALICE are readily eluted from the **polymer** support under mild acid condition with high yield and permit the direct down stream mass spectrometric anal. without any further sample manipulation. In combination with our novel dual column two dimensional liq. chromatog.- mass spectrometry (2D-LC-MS/MS) design, the ALICE procedure proves to a general approach for quant. mass spectrometric anal. of **protein** mixts. with better dynamic range and sensitivity.

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=> s pmma and peg and hirudin
         29865 PMMA
           108 PMMAS
         29871 PMMA
                 (PMMA OR PMMAS)
         27463 PEG
           992 PEGS
         27889 PEG
                 (PEG OR PEGS)
          2752 HIRUDIN
            86 HIRUDINS
          2757 HIRUDIN
                 (HIRUDIN OR HIRUDINS)
L4           1 PMMA AND PEG AND HIRUDIN

=> d l4 ibib abs hitrn

L4   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         1998:701043  CAPLUS
DOCUMENT NUMBER:          129:306544
```

TITLE: **PMMA** membranes with polyethylene glycol-bound physiologically active substances
INVENTOR(S): Bucha, Elke; Nowak, Goetz
PATENT ASSIGNEE(S): Max-Planck-Gesellschaft zur Foerderung der Wissenschaften e.V., Germany
SOURCE: Ger. Offen., 10 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19715504	A1	19981015	DE 1997-19715504	19970414
DE 19715504	C2	20001026		
WO 9846648	A1	19981022	WO 1998-EP2183	19980414
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9875254	A1	19981111	AU 1998-75254	19980414
EP 975680	A1	20000202	EP 1998-922710	19980414
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001527539	T2	20011225	JP 1998-543496	19980414
US 2002028201	A1	20020307	US 1999-417534	19991014

PRIORITY APPLN. INFO.: DE 1997-19715504 A 19970414
WO 1998-EP2183 W 19980414

AB A **PMMA** membrane or copolymer membrane with **PEG**-bound physiol. active substances is used as a functional antidote (e.g., contg. antibodies, enzymes, anticoagulants, tumor markers) in extracorporeal therapeutic systems, e.g., blood dialysis systems. The **PEG**-bound active substance binds to the membrane. In examples, **hirudin** anticoagulants, **hirudin** monoclonal antibodies, monoclonal antibodies to tumor necrosis factors, and urease were bound to **PEG** and utilized in **PMMA** capillary dialysis systems for blood treatment.

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=> s hydrolysis and bond and polymer and linker and protein and solvent
        394721 HYDROLYSIS
          3100 HYDROLYSES
        395561 HYDROLYSIS
                  (HYDROLYSIS OR HYDROLYSES)
        472539 BOND
        239421 BONDS
        611317 BOND
                  (BOND OR BONDS)
        931714 POLYMER
        783177 POLYMERS
       1269147 POLYMER
                  (POLYMER OR POLYMERS)
         14504 LINKER
          3402 LINKERS
         16439 LINKER
                  (LINKER OR LINKERS)
       1584147 PROTEIN
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       1089521 PROTEINS
       1834710 PROTEIN
                 (PROTEIN OR PROTEINS)
        591784 SOLVENT
        295003 SOLVENTS
        746315 SOLVENT
                 (SOLVENT OR SOLVENTS)
L5           0 HYDROLYSIS AND BOND AND POLYMER AND LINKER AND PROTEIN AND SOLVE
               NT

=> s bond and polymer and protein and linker and solvent
        472539 BOND
        239421 BONDS
        611317 BOND
                 (BOND OR BONDS)
        931714 POLYMER
        783177 POLYMERS
       1269147 POLYMER
                 (POLYMER OR POLYMERS)
       1584147 PROTEIN
       1089521 PROTEINS
       1834710 PROTEIN
                 (PROTEIN OR PROTEINS)
         14504 LINKER
          3402 LINKERS
         16439 LINKER
                 (LINKER OR LINKERS)
        591784 SOLVENT
        295003 SOLVENTS
        746315 SOLVENT
                 (SOLVENT OR SOLVENTS)
L6           2 BOND AND POLYMER AND PROTEIN AND LINKER AND SOLVENT

=> d l6 1-2 ibib abs hitrn

L6   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2002:927682  CAPLUS
DOCUMENT NUMBER:          138:1971
TITLE:                    Cleavable surfactants and methods of use for sample
                          preparation
INVENTOR(S):              Caprioli, Richard M.; Porter, Ned A.; Norris, Jeremy
                          L.
PATENT ASSIGNEE(S):       Vanderbilt University, USA
SOURCE:                   PCT Int. Appl., 74 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     WO 2002097393      A2   20021205       WO 2002-US16640  20020528
     WO 2002097393      A3   20030313
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,
             TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
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CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: US 2001-294337P P 20010529
OTHER SOURCE(S): MARPAT 138:1971

AB The invention concerns cleavable compns. and methods of use esp. in MALDI MS anal. of hydrophobic **proteins**. Accordingly, the present invention provides, in part, compns. and methods including, but not limited to: novel cleavable surfactants and methods for prepg. cleavable surfactants and using them in proteomic anal. including for matrix assisted laser desorption ionization mass spectrometry (MALDI MS). Certain compns. disclosed herein include the surprising properties of being a surfactant that yields one or more analyte assisting mols. upon cleavage including a MALDI matrix compn. and a volatile **solvent**.

L6 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1991:118095 CAPLUS
DOCUMENT NUMBER: 114:118095
TITLE: Process for covalent surface modification of hydrophobic **polymers** and affinity membranes made therefrom
INVENTOR(S): Azad, A. R. M.; Goffe, Randal A.
PATENT ASSIGNEE(S): Sepracor, Inc., USA
SOURCE: PCT Int. Appl., 145 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9004609	A1	19900503	WO 1989-US4620	19891016
W: AU, BB, BG, BR, DK, FI, HU, JP, KR, LK, MC, MG, MW, NO, RO, SD, SU				
RW: AT, BE, BF, BJ, CF, CG, CH, CM, DE, FR, GA, GB, IT, LU, ML, MR, NL, SE, SN, TD, TG				
AU 8945292	A1	19900514	AU 1989-45292	19891016
EP 520979	A1	19930107	EP 1989-912861	19891016
EP 520979	B1	19990113		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
AT 175681	E	19990115	AT 1989-912861	19891016
US 5462867	A	19951031	US 1994-190732	19940202
PRIORITY APPLN. INFO.:			US 1988-258406	19881017
			WO 1989-US4620	19891016
			US 1992-956432	19921001

AB The title process comprises e.g. (1) contacting a hydrophobic **polymer** with a soln. of a 1st nonsolubilizing **solvent** and a **linker** for sufficient time to form a covalent **bond** between the **linker** for sufficient time to form a covalent **bond** between the **linker** and a functionalizable side chain of the hydrophobic **polymer**; (2) contacting the reacted **polymer** of 1 with a soln. of a 2nd nonsolubilizing **solvent** and a mammol. for sufficient time to covalently bind the macromol. to the covalently bonded **linker** moiety. The above product may then be reacted with a reagent capable of producing active sites on the covalently bonded macromol., followed by reaction the produced active sites with a ligand. The process is conveniently carried out under heterogeneous conditions and proceeds with without a significant redn. in microporous membrane pore dimensions or hydraulic permeability of the original unmodified membrane. Also provided are a 4-component dope compn. and a spinnerette assembly useful for the manuf. of the **polymers** of the invention. Thus, poly(ether sulfone)/poly(ethylene oxide) hollow fiber membranes were prepd., treated with ethylene glycol diglycidyl

ether, and then reacted with hydroxyethyl cellulose. The resulting fibers were activated with 2-fluoro-1-methylpyridinium p-toluenesulfonate and then reacted with antibodies to blood coagulation factor VIII. The resulting affinity membrane was used to purify factor VIII 115-fold from a factor VIII conc. Details of manuf. of the **polymers** of the invention are given, as are schematic diagrams of the spinnerette assembly.

Title: **Immobilization of poly(ethylene glycol) or its sulfonate onto polymer surfaces by ozone oxidation.**

Author(s): Ko YG; Kim YH; Park KD; Lee HJ; Lee WK; Park HD; Kim SH; Lee GS; Ahn DJ

Author's Address: Biomaterials Research Center, Korea Institute of Science and Technology, Cheongryang, Seoul, South Korea.

Source: Biomaterials [Biomaterials] 2001 Aug; 22 (15), pp. 2115-23.

Pub. Type: Journal Article

Language: English

Journal Info: *Country of Publication:* England *NLM ID:* 8100316 *ISSN:* 0142-9612 *Subsets:* IM

MeSH Terms:
Biocompatible Materials/*chemistry
Blood Platelets/*cytology
Oxygen/*metabolism
Ozone/*metabolism
Polyethylene Glycols/*chemistry
Polymers/*chemistry
Polymethyl Methacrylate/*chemistry
Blood Platelets/chemistry; Blood Platelets/metabolism; Cell Adhesion; Human; Microscopy, Atomic Force; Protein Binding; Spectroscopy, Fourier Transform Infrared; Support, Non-U.S. Gov't; Time Factors

Abstract: A novel surface modification method has been developed to improve biocompatibility of polymeric biomaterials. This approach involves ozonation and then followed by graft polymerization with acrylates containing ***PEG***, sulfonated ***PEG*** or by coupling of ***PEG*** derivatives. All the reactions were confirmed by ATR FT-IR and ESCA. The degree of ozonation measured by the iodide method was dependent on the ozone permeability of the polymers used. Surface hydrophilicity was investigated by measuring the contact angles. Ozonation itself yielded a slight increase in hydrophilicity and a decrease in platelet adhesion, but ***PEG*** immobilization showed a significant effect on surface hydrophilicity and platelet adhesion to confirm well-known ***PEG***'s passivity which minimize the adhesion of blood components on polymer surfaces. Both graft polymerization and coupling were effective for PU. In contrast, only grafting gave enough yields for ***PMMA*** and silicone. Platelet adhesion results demonstrated that all ***PEG*** modified surfaces adsorbed lower platelet adhesion than untreated or ozonated ones. Polymers coupled with sulfonated ***PEG*** exhibited the lowest platelet adhesion when compared with control and ***PEG*** coupled ones by virtue of the synergistic effect of non-adhesive ***PEG*** and negatively charged SO3 groups. This ***PEG*** or sulfonated ***PEG*** immobilization technology using ozonation is relatively simple for introducing uniform surface modification and therefore very useful for practical application of blood contacting medical devices.

CAS Registry No.: 0 (Biocompatible Materials)
0 (Polyethylene Glycols)
0 (Polymers)
10028-15-6 (Ozone)
7782-44-7 (Oxygen)

9011-14-7 (Polymethyl Methacrylate)

Entry Date(s): *Date Created:* 20010702 *Date Completed:* 20011207

Citation ID(s): *PMID:* 11432591 *Medline UI:* 21325153

Persistent link to this record: http://search.epnet.com/direct.asp?an=11432591&db=cmedm&tg=PM

Database: MEDLINE

F rmats: Citation

Title: **Thermoprecipitation of streptavidin via oligonucleotide-mediated self-assembly with poly(N-isopropylacrylamide).**

Author(s): Fong RB; Ding Z; Long CJ; Hoffman AS; Stayton PS

Author's Address: Department of Bioengineering, University of Washington, Seattle, Washington 98195, USA.

Source: Bioconjugate chemistry [Bioconjug Chem] 1999 Sep-Oct; 10 (5), pp. 720-5.

Pub. Type: Journal Article

Language: English

Journal Info: *Country of Publication:* UNITED STATES *NLM ID:* 9010319 *ISSN:* 1043-1802 *Subsets:* IM

MeSH Terms: Acrylamides/*chemical synthesis
Oligonucleotides/*chemistry
Streptavidin/*analogs & derivatives
Streptavidin/*chemistry
Acrylamides/chemistry; Alkaline Phosphatase/chemistry; Anions; Biotin/chemistry; Biotinylation; Chemistry, Physical; Chromatography, Affinity/methods; Chromatography, Ion Exchange; DNA/chemistry; Heat; Indicators and Reagents; Oligonucleotides/isolation & purification; Precipitation; Solutions; Streptavidin/chemical synthesis; Streptavidin/isolation & purification; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.

Abstract: A versatile strategy has been developed for selectively and sequentially isolating targets in a liquid-phase affinity separation environment. The strategy uses a recently developed approach for joining together molecules in linkages that are defined by the complementary pairing of oligonucleotides conjugated to the different molecules [Niemeyer, C. M., Sano, T., Smith, C. L., and Cantor, C. R. (1994) Nucleic Acids Res. 22, 5530-9]. In the work presented here, streptavidin was noncovalently coupled with the temperature-responsive poly(N-isopropylacrylamide) [poly(NIPAAM)] through the sequence-specific hybridization of oligonucleotides conjugated to the ***protein*** and ***polymer***. A 20-mer oligonucleotide was covalently linked through a heterobifunctional ***linker*** to a genetically engineered streptavidin variant that contained a unique cysteine residue at the ***solvent***-accessible site Glu 116. The complementary DNA sequence was conjugated to the end of a linear ester-activated poly(NIPAAM). The two conjugates were allowed to self-assemble in solution via hybridization of their complementary DNA sequences. The streptavidin-poly(NIPAAM) complex could be used to affinity-precipitate radiolabeled biotin or biotinylated alkaline phosphatase above 32 degrees C through the thermally induced phase separation activity of the poly(NIPAAM). The streptavidin-oligo species could then be reversibly separated from the precipitated ***p lym r***-oligo conjugate and recycled by lowering the salt concentration, which results in denaturation of the short double-stranded DNA connection. The use of oligonucleotides to couple ***polymer*** to streptavidin allows for selective precipitation of different polymers and streptavidin complexes based on the sequence-specific

hybridization of their oligonucleotide appendages.

Grant Information: R01GM53771A GM NIGMS

CAS Registry No.: 0 (Acrylamides)
0 (Anions)
0 (Indicators and Reagents)
0 (Oligonucleotides)
0 (Solutions)
0 (streptavidin-poly(N-isopropylacrylamide))
58-85-5 (Biotin)
9007-49-2 (DNA)
9013-20-1 (Streptavidin)
EC 3.1.3.1 (Alkaline Phosphatase)

Revision Date: 20001218

Entry Date(s): *Date Created:* 19991119 *Date Completed:* 19991119

Citation ID(s): *PMID:* 10502336 *Medline UI:* 99433843

Persistent link to this record: http://search.epnet.com/direct.asp?an=10502336&db=cmedm&tg=PM

Database: MEDLINE

Formats: Citation

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